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## DATASHEET

### Doxorubicin hydrochloride

#### Product overview

<b>Name</b>	Doxorubicin hydrochloride
<b>Cat No</b>	HB4183
<b>Alternative names</b>	Adriamycin, NSC 123127, DOX, DXR
<b>Applications</b>	Antineoplastic Agent
<b>Purity</b>	>99%
<b>Description</b>	Antibiotic. DNA topoisomerase II inhibitor. Apoptosis inducer.

#### Biological Data

<b>Biological description</b>	Antibiotic and DNA topoisomerase II inhibitor.
	Intercalates into DNA to inhibit nucleic acid synthesis.
	Induces apoptosis and shows antitumor and anti-neoplastic activity

#### Solubility & Handling

<b>Storage instructions</b>	Room temperature
<b>Solubility overview</b>	Soluble in DMSO (50 mM) and water (50 mM)
<b>Important</b>	This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use.

#### Chemical Data

<b>Chemical name</b>	10-[(3-Amino-2,3,6-trideoxy- $\alpha$ -L-lyxohexopyranosyl)oxy]-7,8,9,10-tetrahydro-6,8,11-trihydroxy-8-(hydroxyacetyl)-5,12-naphthacenedione hydrochloride
<b>Molecular Weight</b>	579.99
<b>Chemical structure</b>	
<b>Molecular Formula</b>	C <sub>27</sub> H <sub>29</sub> NO <sub>11</sub> .HCl
<b>CAS Number</b>	25316-40-9
<b>PubChem identifier</b>	443939
<b>SMILES</b>	<chem>C[C@H]1[C@H]([C@H]([C@@H](O1)O[C@H]2C[C@@](CC3=C(C4=C(C(=O)C5=C(C4=O)C=CC5OC)O)(C(=O)CO)O)N)O)O)Cl</chem>
<b>InChiKey</b>	MWWSFMDVAYGXBV-RUELKSSGSA-N
<b>MDL number</b>	MFCD00077757
<b>Appearance</b>	Orange

#### References

**Identification of yeast DNA topoisomerase II mutants resistant to the antitumor drug doxorubicin: implications for the mechanisms of doxorubicin action and cytotoxicity.**

Patel et al (1997) Mol Pharmacol 52(4)

**PubMedID** [9380029](#)

**Studies on the in vitro reactivity of clofibryl and fenofibryl glucuronides. Evidence for protein binding via a Schiff's base mechanism.**

Grubb et al (1993) *Biochem Pharmacol* 46(3)

**PubMedID**

[8347161](#)

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